ISSN 1809-127X (online edition)

Open Access | Freely available at *www.checklist.org.br*

Check List
Journal of species lists and distribution

NOTES ON GEOGRAPHIC DISTRIBUTION

# Amphibia, Anura, Hylidae, *Trachycephalus atlas* Bokermann, 1966: Distribution extension and geographic distribution map

Igor Joventino Roberto [1*], Samuel Cardozo Ribeiro [2], Lucas Bezerra [3], Pedro Bastos de Macedo Carneiro [4]

1 Sertões Consultoria Ambiental e Assessoria, Rua Bill Cartaxo, 135, Sapiranga. CEP 60833-185. Fortaleza, CE, Brasil.
2 Universidade Federal do Pernambuco, Departamento de Zoologia, Programa de Pós-Graduação em Biologia Animal. Avenida Prof. Moraes Rego, 1235. CEP 50670-420. Recife, PE, Brasil.
3 Universidade Federal do Ceará, Departamento de Biologia, Programa de Pós-Graduação em Ecologia e Recursos Naturais. Avenida Humberto Monte, 2977, CEP 60455-760. Fortaleza, CE, Brasil.
4 Universidade Federal do Ceará, Instituto de Ciências do Mar (LABOMAR), Laboratório de Macroalgas. Avenida Abolição, 3207, Meireles. CEP 60165-081. Fortaleza, CE, Brasil.
* Corresponding author. E-mail: *igorjoventino@yahoo.com.br*

**ABSTRACT:** The casqued-headed tree frog *Trachycephalus atlas* Bokermann, 1966 is recorded for the first time in the municipality of Jati, southern region of Ceará state, northeastern Brazil, extending in 72 km east the previous known geographic distribution of this species. An updated geographic distribution map of *T. atlas* is provided.

The genus *Trachycephalus* Tschudi, 1838 is represented by twelve species: *Trachycephalus atlas Bokermann, 1966; Trachycephalus coriaceus* (Peters, 1867); *Trachycephalus dibernardoi* Kwet and Solé, 2008; *Trachycephalus hadroceps* (Duellman and Hoogmoed, 1992); *Trachycephalus imitatrix* (Miranda-Ribeiro, 1926); *Trachycephalus jordani* (Stejneger and Test, 1891); *Trachycephalus lepidus* (Pombal, Haddad and Cruz, 2003); *Trachycephalus mambaiensis* Cintra, Silva, Silva, Garcia and Zaher, 2009; *Trachycephalus mesophaeus* (Hensel, 1867); *Trachycephalus nigromaculatus* Tschudi, 1838; *Trachycephalus resinifictrix* (Goeldi, 1907); and *Trachycephalus typhonius* (Linnaeus, 1758) (Frost 2011). This genus is characterized by 37 transformations in nuclear and mitochondrial protein and ribosomal genes, and by the presence of paired vocal sacs protruding posterior to the angles of the jaws when inflated (Faivovich *et al.* 2005). *Trachycephalus* species are found in the lowlands of Mexico, Central and South America east of the Andes, south to north Argentina and eastern Brazil, and only *Trachycephalus hadroceps* and *T. jordani* do not occur in Brazil (Frost 2011).

The casque-headed treefrog *Trachycephalus atlas* is characterized by a cranial co-ossification on the skull, large size (SVL male 98 mm; female 107 mm), dorsum pale brown, with a big dark blotch like an inverted Y in the central region, forearm and arm with a dark transversal band, legs with three dark transversal bands, laterally black rings with yellow-cream in the central region, venter white cream, with black vocal sacs (Bokermann 1966).

*Trachycephalus atlas* was described for the locality of Fazenda Santo Onofre, municipality of Maracás, state of Bahia (Bokermann 1966). Since then only few distributional records were made for the species, all of them restricted to the northeastern Brazil (Caramaschi and Silvano 2004; Borges-Nojosa and Santos 2005; Bastazini *et al.* 2007; Freitas and Silva 2007).

Caramaschi and Silvano (2004) provided a distribution map for *T. atlas*, where the species range extends from the municipality of Itapetinga, southeast region of the state of Bahia, north to Exú, state of Pernambuco. Borges-Nojosa and Santos (2005) documented the species for the municipality of Betânia, in a Caatinga dry forest habitat, semi-arid region in the state of Pernambuco. Bastazini *et al.* (2007) reported it for the municipality of Mata do São João, in a Restinga environment in the coastal region of the state of Bahia. Freitas and Silva (2007) reported the species in the southeast of Bahia in deciduous seasonal forests in the Planalto da Conquista region, municipality of Barra do Choça and Igaporã, and in the Restinga of the north coast of Bahia, in the municipalities of Dias D´Ávila and Camaçarí.

Two adult female specimens of *Trachycephalus atlas* (Figure 1) were collected (permits: 021/2008-CGFAB) around 19:00 h on April 25 and 28, 2008, on the branches

**FIGURE 1.** Adult female of *Trachycephalus atlas* (MNRJ 55562) from the municipality of Jati, state of Ceará, Brazil. Photo by Igor J. Roberto.

of a Juazeiro tree (*Ziziphus joazeiro*) 4 m from the ground and 10 m from a permanent pond in the locality of Sítio Bálsamo, municipality of Jati, south region of the Ceará state, northeastern Brazil (7°37'47.76" S, 39°2´46.41" W, 513 m a.s.l.).

The area is within the Caatinga biome, characterized by thorny shrubs vegetation and arboreal dry forest with the presence of a permanent pond, 70 m wide and 1-2 m depth, and several small temporary ponds.

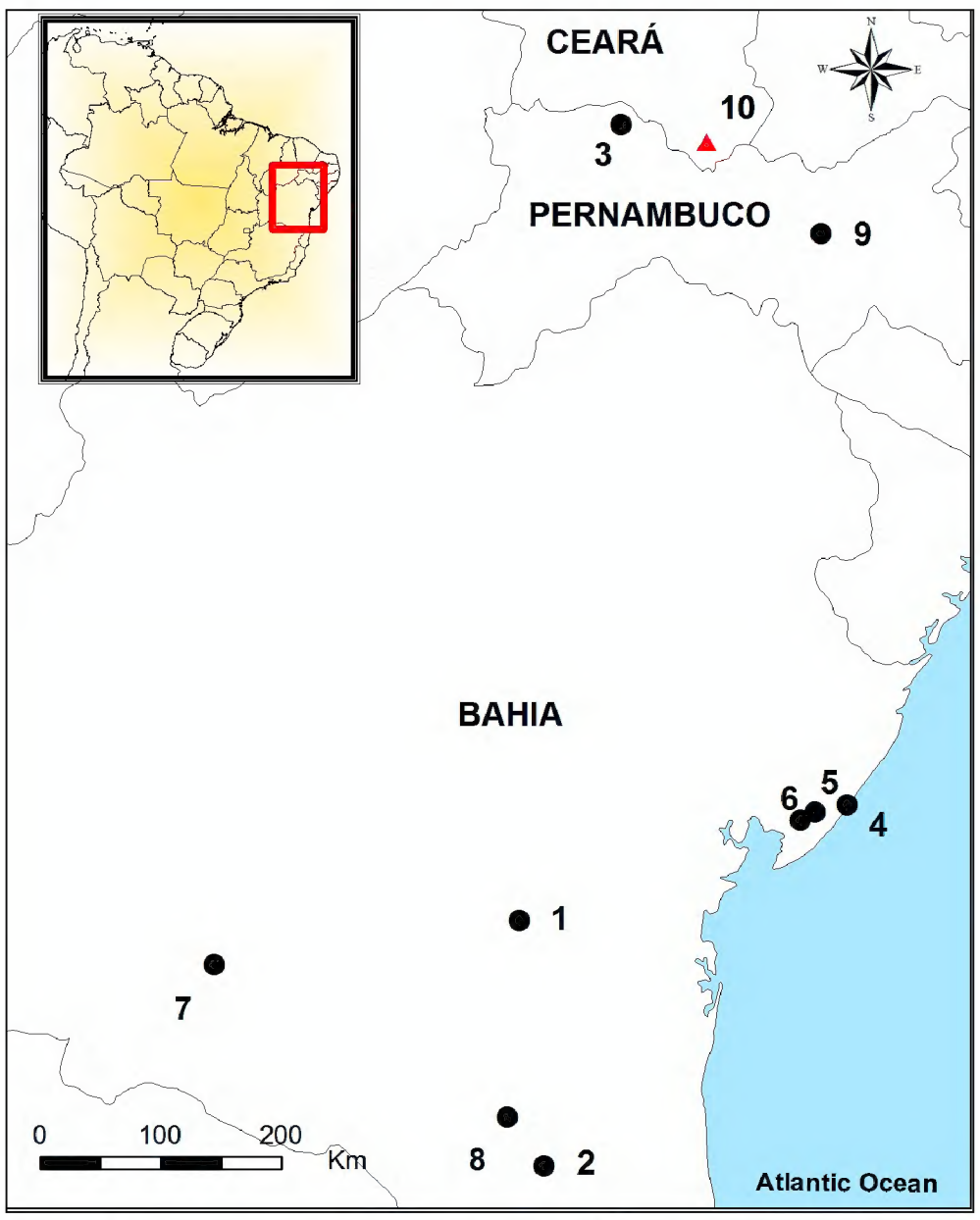


**Figure 2.** Know distribution of *Trachycephalus atlas*. 1. Maracás, type locality (Bokermann 1966); 2. Itapetinga; 3. Exú (Caramaschi and Silvano 2004); 4. Mata do São João; 5. Dias D' Ávila; 6. Camaçarí; 7. Igaporã; 8. Barra do Choça (Freitas and Silva 2007); 9. Betânia ( Borges-Nojosa and Santos 2005); 10. Jatí (this study).

This is the first record of *T. atlas* in the state of Ceará, increasing the known distribution range for this species approximately in 72 km east, from its nearest locality, municipality of Exú, state of Pernambuco (Caramaschi and Silvano 2004). An updated *T. atlas* geographic distribution map is provided. (Figure 2).

The voucher specimens were deposited at the Coleção Herpetológica do Museu Nacional do Rio de Janeiro (MNRJ – 55562; 55777).

**Acknowledgments:** We would like to thanks Thieres Pinto for helping with the map design and fieldwork, and Javan Santos for fieldwork assistance. LB thanks Fundação Cearense de Apoio a Pesquisa (FUNCAP) for Fellowship grant.

## Literature Cited

Bastazini, C.M., J.F.V. Munduruca, P.L.B. Rocha and M.F. Napoli. 2007. Which environmental variables better explain changes in anuran community composition? A case study in the restinga of Mata de São João, Bahia, Brazil. *Herpetologica* 63(4): 459-471.

Bokermann, W.C.A. 1966. Una nueva especie de *Trachycephalus* de Bahia, Brasil. *Neotropica* 12(39): 120-124.

Borges-Nojosa, D.M. and E.M. Santos. 2005. Herpetofauna da área de Betânia e Floresta, Pernambuco; p. 277-294 *In* F.S. Araújo, M.J.N. Rodal and M.R.V. Barbosa (ed.). *Análise das variações da biodiversidade do bioma Caatinga: suporte e estratégias de conservação*. Brasília: Ministério do Meio Ambiente.

Caramaschi, U. and D. Silvano. 2004. *Trachycephalus atlas. IUCN Red List of Threatened Species. Version 2009.2.* Electronic Database accessible at <http:// www.iucnredlist.org>. Captured on 05 February 2010.

Faivovich, J., C.F.B. Haddad, P.C.A. Garcia, D.R. Frost, J.A. Campbell and W.C. Wheller. 2005. Systematic review of the frog family Hylidae, with special reference to Hylinae: phylogenetic analysis and taxonomic revision. *Bulletin of the American Museum of Natural History* 294:1-240.

Freitas, M.A. and T.F.S. Silva. 2007. *A herpetofauna das caatingas e áreas de altitudes do nordeste brasileiro.* Pelotas: USEB. 384 p.

Frost, D.R. 2011. *Amphibian species of the world: an online reference version 5.5 (12 May, 2011)*. Electronic Database accessible at <http// research.amnh.org/herpetology/amphibian/index.php>. American Museum of Natural History, New York, USA. Captured on 5 February 2010.

Received: May 2010
Last Revised: April 2011
Accepted: May 2011
Published online: May 2011
Editorial responsibility: Mara Cíntia Kiefer